

LTC 2821/91



Security Systems

EN | Instruction Manual
21-inch
Color Monitor

BOSCH

Important Safeguards

1. Read Instructions - All safety and operating instructions should be read before the unit is operated.
2. Retain Instructions - The safety and operating instructions should be retained for future reference.
3. Heed Warnings - All warnings on the unit and in the operating instructions should be adhered to.
4. Follow Instructions - All operating and use instructions should be followed.
5. Cleaning - Unplug the unit from the outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
6. Attachments - Do not use attachments not recommended by the product manufacturer as they may cause hazards.
7. Water and Moisture - Do not use this unit near water - for example, in a wet basement, near a swimming pool, in an unprotected outdoor installation, or in any area which is classified as a wet location.
8. Accessories - Do not place this unit on an unstable stand, tripod, bracket, or mount. The unit may fall, causing serious injury to a person and serious damage to the unit. Use only with a stand, tripod, bracket, or mount recommended by the manufacturer or sold with the product. Any mounting of the unit should follow the manufacturer's instructions and should use a mounting accessory recommended by the manufacturer.

An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn. 
9. Ventilation - This unit should not be placed in a built-in installation or rack, unless proper ventilation is provided, or the manufacturer's instructions have been adhered to. The equipment must not exceed its maximum operating temperature requirements.
10. Power Sources - This unit should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply you plan to use, consult your dealer or local power company. For units intended to operate from battery power or other sources, refer to the operating instructions.

11. Grounding or Polarization - This unit may be equipped with a polarized alternating-current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug. Alternately, this unit may be equipped with a 3-wire grounding-type plug, a plug having a third (grounding) pin. This plug will only fit into a grounding-type power outlet. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding-type plug.
12. Power Cord Protection - Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords and plugs, convenience receptacles, and the point where they exit from the appliance.
13. Power Lines - An outdoor system should not be located in the vicinity of overhead power lines or other electric light or power circuits or where it can fall into such power lines or circuits. When installing an outdoor system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal. U.S.A. models only - refer to the National Electrical Code Article 820 regarding installation of CATV systems.
14. Overloading - Do not overload outlets and extension cords as this can result in a risk of fire or electric shock.
15. Object and Liquid Entry - Never push objects of any kind into this unit through openings, as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the unit.
16. Servicing - Do not attempt to service this unit yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

17. Damage Requiring Service - Unplug the unit from the outlet and refer servicing to qualified service personnel under the following conditions:
 - a. When the power supply cord or plug is damaged.
 - b. If liquid has been spilled or objects have fallen into the unit.
 - c. If the unit has been exposed to water and/or inclement weather (rain, snow, etc.).
 - d. If the unit does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions, as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the unit to its normal operation.
 - e. If the unit has been dropped or the cabinet has been damaged.
 - f. When the unit exhibits a distinct change in performance--this indicates a need for service.
18. Replacement Parts - When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.
19. Safety Check - Upon completion of any service or repairs to this unit, ask the service technician to perform safety checks to determine that the unit is in proper operating condition.
20. Coax Grounding - If an outside cable system is connected to the unit, be sure the cable system is grounded. U.S.A. models only--Section 810 of the National Electrical Code, ANSI/NFPA No.70, provides information with respect to proper grounding of the mount and supporting structure, grounding of the coax to a discharge unit, size of grounding conductors, location of discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.
21. Lightning - For added protection of this unit during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the cable system. This will prevent damage to the unit due to lightning and power line surges.

FCC & ICES INFORMATION

(U.S.A. and Canadian Models Only)

This device complies with part 15 of the FCC Rules.

Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

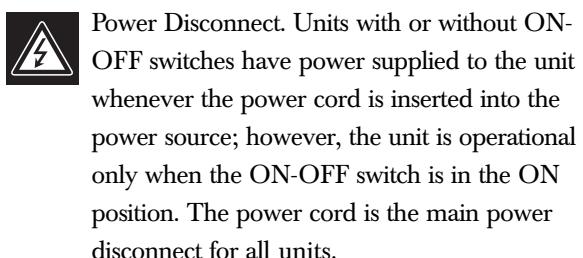
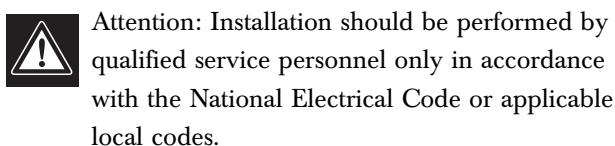
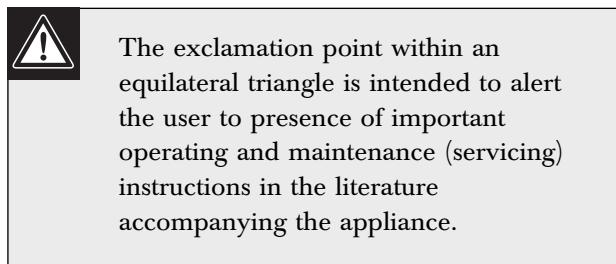
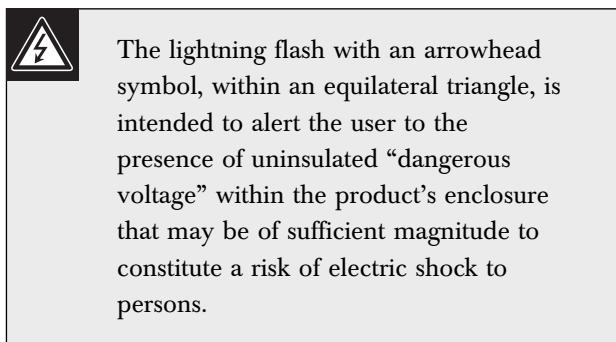
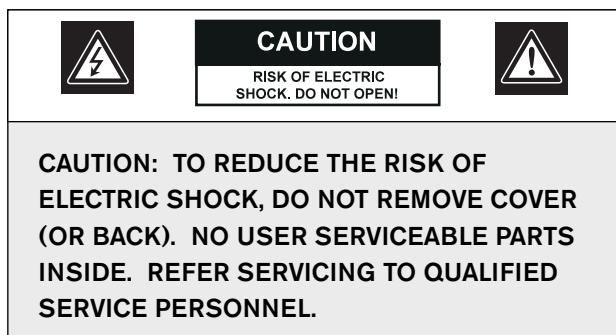
NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules and ICES-003 of Industry Canada. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and radiates radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his expense.

Intentional or unintentional changes or modifications, not expressly approved by the party responsible for compliance, shall not be made. Any such changes or modifications could void the user's authority to operate the equipment. If necessary, the user should consult the dealer or an experienced radio/television technician for corrective action.

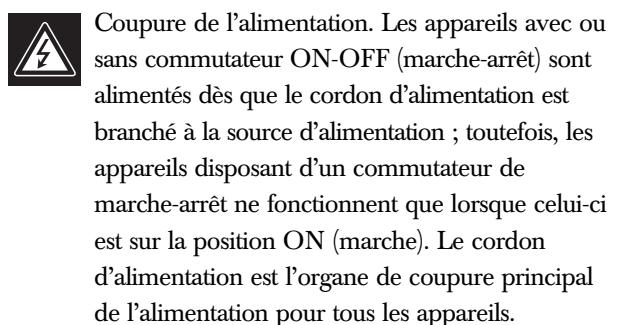
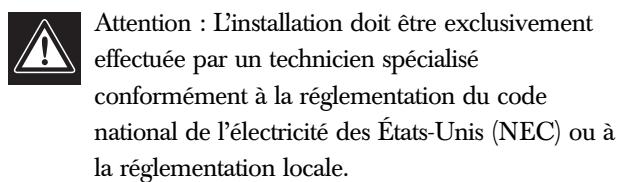
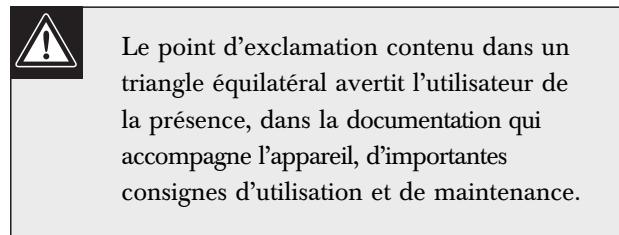
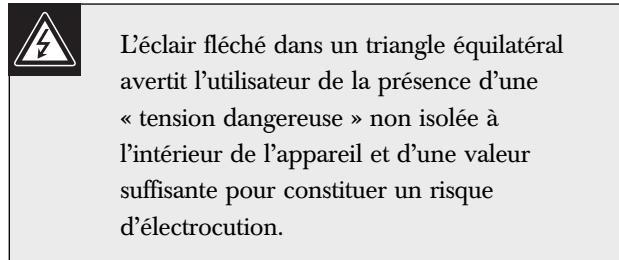
WARNING: This is a Class A product. In a domestic environment, this product may cause radio interference, in which case, the user may be required to take adequate measures.

The user may find the following booklet, prepared by the Federal Communications Commission, helpful: [How to Identify and Resolve Radio-TV Interference Problems](#). This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, Stock No. 004-000-00345-4.

Safety Precautions



Sécurité



Sicherheitshinweise



VORSICHT

ELEKTRISCHE SPANNUNG.
NICHT OFFNEN!



VORSICHT: DAS GEHÄUSE ZUR VERMEIDUNG VON ELEKTRISCHEN SCHLÄGEN NICHT ÖFFNEN. DAS GERÄT ENTHÄLT KEINE VOM BENUTZER ZU WARTENDEN TEILE. REPARATUREN NUR VON FACHPERSONAL AUSFÜHREN LASSEN.



Das Blitzsymbol im gleichseitigen Dreieck soll den Benutzer auf nicht isolierte „gefährliche Spannung“ im Produkt hinweisen, die ausreichend stark sein kann, um die Gefahr von elektrischen Schlägen für Menschen darzustellen.



Das Ausrufungszeichen im gleichseitigen Dreieck soll den Benutzer auf wichtige Bedienungs- und Wartungsanweisungen in der Dokumentation hinweisen, die dem Gerät beiliegt.



Achtung: Die Installation darf nur von qualifiziertem Wartungspersonal gemäß dem National Electrical Code oder den gültigen örtlichen Vorschriften durchgeführt werden.



Abtrennen der Spannungsversorgung: Die Spannungsversorgung zu Geräten mit und ohne Ein/Aus-Schalter ist hergestellt, wenn das Netzkabel an eine Netzsteckdose angeschlossen ist. Das Gerät ist jedoch nur betriebsbereit, wenn der Ein/Aus-Schalter eingeschaltet ist. Bei allen Geräten erfolgt das Abtrennen der Spannungsversorgung über das Netzkabel.

Precauciones de Seguridad



ATTENZIONE

PERICOLO DI SCOSA ELETTRICA.
NON APRIRE.



PRECAUCIÓN: PARA REDUCIR EL RIESGO DE DESCARGA ELÉCTRICA, NO ABRA LAS TAPAS. EN EL INTERIOR NO HAY NINGÚN COMPONENTE REPARABLE POR EL USUARIO. LAS REPARACIONES DEBE REALIZARLAS PERSONAL CUALIFICADO.



El símbolo de flecha en forma de rayo situado dentro de un triángulo equilátero pretende alertar al usuario de la presencia de “voltaje peligroso” sin aislamiento dentro de la caja del producto, el cual podría resultar de una magnitud suficiente como para presentar un riesgo de descarga eléctrica para las personas.



El punto de exclamación dentro de un triángulo equilátero pretende alertar al usuario de la existencia de instrucciones de funcionamiento y mantenimiento (reparación) en la documentación suministrada con el aparato.



Atención: La instalación debe realizarla personal cualificado en cumplimiento estricto del código eléctrico nacional (en el caso de los EE.UU.) o de los códigos locales aplicables.



Para Desconectar la Alimentación: Unidades no equipadas con interruptores ON/OFF, son alimentadas cuando el cable de alimentación es conectado a la corriente eléctrica. Las unidades equipadas con interruptores son alimentadas de igual forma, pero adicionalmente requieren que el interruptor esté posicionado en ON. El cable de alimentación es el medio principal de desconexión del equipo.

Veiligheidsmaatregelen



VOORZICHTIG

GEVAAR VOOR ELEKTRISCHE SCHOK.
NIET OPENEN!



GEVAAR: OPEN DEZE BEHUIZING NIET, TENEINDE HET RISICO VAN ELEKTRISCHE SCHOKKEN TE VOORKOMEN. BINNENIN BEVINDEN ZICH GEEN DOOR DE GEBRUIKER TE REPAREREN ONDERDELEN. RAADPLEEG VOOR REPARATIE GEKWALIFICEERD SERVICEPERSONEEL.



Het symbool van een bliksem met pijlpunt in een gelijkzijdige driehoek is bedoeld om de gebruiker te waarschuwen voor de aanwezigheid van een niet geïsoleerde 'gevaarlijke spanning' binnen in de behuizing van het product, die voldoende sterk kan zijn om personen het risico van een elektrische schok te geven.



Het symbool van een uitroepsteken in een gelijkzijdige driehoek is bedoeld om de gebruiker te waarschuwen voor de aanwezigheid van belangrijke bedienings- en onderhouds- (service-) instructies in de documentatie die met het product zijn meegeleverd.



Attentie: De installatie dient alleen te worden uitgevoerd door gekwalificeerd servicepersoneel en in overeenstemming met de plaatselijk geldende installatievoorschriften.



Onderbreken van de spanning. Units met of zonder AAN/UIT-schakelaar, staan onder spanning zolang het netsnoer is verbonden met de wandcontactdoos. De unit is echter alleen bedrijfsklaar als de AAN/UIT-schakelaar in de AAN-stand staat. Losnemen van het netsnoer is voor alle units de belangrijkste manier om de spanning te onderbreken.

Sicurezza



ATTENZIONE

PERICOLO DI SCOSSA ELETTRICA.
NON APRIRE.



ATTENZIONE: PER RIDURRE IL PERICOLO DI SCOSSA ELETTRICA, NON APRIRE LE COPERTURE. L'INTERNO NON CONTIENE COMPONENTI CHE L'UTENTE PUÒ RIPARARE PERSONALMENTE. RIVOLGERSI AL PERSONALE DI ASSISTENZA QUALIFICATO PER QUALSIASI INTERVENTO DI RIPARAZIONE..



Il simbolo triangolare di un fulmine con la punta a freccia intende mettere in allerta l'utente riguardo alla presenza di tensioni pericolose non isolate all'interno del guscio dell'unità, che potrebbero essere di intensità sufficiente per costituire pericolo di elettrocuzione.



Il punto esclamativo racchiuso in un triangolo equilatero intende avvisare l'utente in merito alla presenza di importanti istruzioni operative e di manutenzione nella documentazione di accompagnamento all'unità.



Precauzione: affidare l'installazione al solo personale qualificato e nel rispetto del Codice elettrico nazionale (USA) o dei codici locali pertinenti.



Scollegamento dell'alimentazione. Gli apparecchi con o senza commutatori ON-OFF ricevono corrente tutte le volte che il cavo di alimentazione è inserito nella presa di forza; tuttavia, gli apparecchi muniti di commutatore ON-OFF funzionano solo se quest'ultimo è in posizione ON. Il cavo di alimentazione serve a scollegare dalla corrente tutti gli apparecchi.

Medidas de Segurança



CUIDADO

RISCO DE CHOQUE ELÉCTRICO.
NÃO ABRIR!



CUIDADO: PARA REDUZIR O RISCO DE CHOQUE ELÉCTRICO, NÃO ABRA AS TAMPAS. O INTERIOR NÃO CONTÉM PEÇAS QUE NECESSITEM DE MANUTENÇÃO. A MANUTENÇÃO DEVE SER EFECTUADA POR PESSOAL DE ASSISTÊNCIA TÉCNICA QUALIFICADO.

O símbolo do raio com a cabeça de uma seta dentro de um triângulo equilátero serve para alertar o utilizar para a presença de "corrente eléctrica perigosa" não isolada no interior da caixa do produto que pode ser suficiente para dar origem a choques eléctricos.



O ponto de exclamação dentro de um triângulo equilátero serve para alertar o utilizador para a presença de instruções de funcionamento e manutenção importantes na documentação fornecida com o aparelho.



Atenção: A instalação deve ser efectuada por pessoal de assistência técnica qualificado, de acordo com o National Electrical Code (Normas de Electricidade Nacionais) ou a legislação local aplicável.



Desconexão da electricidade. Unidades com ou sem interruptores ON-OFF são activadas sempre que o cabo eléctrico for ligado a uma fonte de alimentação. No entanto, a unidade fica operacional apenas quando o interruptor ON-OFF se encontrar na posição ON. Para desligar a electricidade em qualquer uma das unidades deve ser utilizado o cabo eléctrico.

Zasady Bezpieczeństwa



UWAGA

NIEBEZPIECZEŃSTWO PORAŻENIA PRĄDEM ELEKTRYCZNYM. NIE OTWIERAĆ!



UWAGA: ZE WZGLĘDU NA NIEBEZPIECZEŃSTWO PORAŻENIA PRĄDEM NIE WOLNO OTWIERAĆ POKRYWY. W ŚRODKU NIE MA ŻADNYCH ELEMENTÓW, KTÓRE MOGĄ BYĆ NAPRAWIANE PRZEZ UŻYTKOWNIKA. NAPRAWĘ NALEŻY POWIERZYĆ AUTORYZOWANEMU PUNKTOWI SERWISOWEMU.



Błyskawica ze strzałką wewnątrz trójkąta równobocznego ma za zadanie zwrócić uwagę użytkownika na obecność nieizolowanego "niebezpiecznego napięcia" wewnętrz obudowy urządzenia, o wielkości stwarzającej niebezpieczeństwo porażenia prądem.



Wykrywnik wewnątrz trójkąta równobocznego ma za zadanie zwrócić uwagę użytkownika na ważne czynności, związane z obsługą i konserwacją urządzenia, zamieszczone w Instrukcji obsługi.



Uwaga: Instalację urządzenia powinien wykonać tylko wykwalifikowany personel, zgodnie z przepisami NEC lub odpowiednimi przepisami miejscowymi.



Odłączanie zasilania. Urządzenia zarówno nie posiadające, jak i posiadające wyłączniki ON-OFF znajdują się pod napięciem, jeżeli tylko przewód zasilający jest połączony ze źródłem zasilania. Jednakże urządzenie działa tylko wtedy, gdy wyłącznik znajduje się w położeniu ON. Przewód zasilający jest głównym odłącznikiem zasilania dla wszystkich rodzajów urządzeń.

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1 UNPACKING

Unpack carefully. This electronic equipment should be handled carefully.

Check to ensure that the following items are included for the model number of the unit ordered.

Verify the model number.

Power cord, 3-wire with grounded U.S. type plug.

Power cord, 3-wire with grounded European
Continental type plug.

Instruction Manual.

If an item appears to have been damaged in shipment, replace it properly in its carton and notify the shipper. If any items are missing, notify your Bosch Security Systems, Inc. Sales Representative or Customer Service Representative. The shipping carton is the safest container in which the unit may be transported. Save it for possible future use.

2 SERVICE

If the unit ever needs repair service, the customer should contact the nearest Bosch Security Systems, Inc. Service Center for authorization to return and shipping instructions.

Service Centers

U.S.A.: Phone: 800-366-2283 or 408-956-3895

fax: 800-366-1329 or 408-956-3896

e-mail:

NationalServiceCenter@ca.slr.com

Canada: 514-738-2434

Europe, Middle East & Asia Pacific Region:
32-1-440-0711

For additional information,
see www.boschsecuritysystems.com.

3 DESCRIPTION

The LTC 2821/91 is a 51-cm (20-inch) high resolution color monitor. It is attractively styled and accepts both NTSC and PAL formats.

4 INSTALLATION

4.1 Power

The LTC 2821/91 operates from 90 to 260 VAC, 50/60 Hz power sources. Power consumption is 90 watts.

4.2 Mounting

This unit is supplied as a desktop unit.

4.3 Cover Removal



Removal of the cover, and adjustment of internal controls, should only be performed by qualified service personnel. Not user-serviceable.

5 CONTROLS & CONNECTIONS

5.1 Front Panel

See FIGURE 1 for location of controls and LED Indicator.

POWER

Selects power ON or OFF.

R: VIDEO A

G: VIDEO B

O: VCR

Combination Red, Green, Orange LED Indicator.

VIDEO

Selects the video signal inputs to the VIDEO A and VIDEO B (composite video BNC connectors) and the audio signal inputs to the AUDIO A and AUDIO B terminals (RCA connectors) on the rear panel. When selected, the LED indicates red for VIDEO A or green for VIDEO B.

VOLUME/DATA

These buttons have two functions:

Volume control: Press the or buttons to adjust the speaker volume.

Data controls: When the SHARP, TINT, COLOR, BRIGHTNESS or CONTRAST buttons are pressed, the or buttons will change the level of the selected function.

CONTRAST

Press this button to adjust picture contrast.

Adjust the level with the VOLUME buttons to control the image contrast (Default is 60).

BRIGHTNESS

Press this button to adjust picture brightness.

Adjust the level with the VOLUME buttons to control the image brightness (Default is 50).

COLOR

Press this button to adjust the picture color intensity. Adjust the level with the VOLUME buttons to control the image color (Default is 50).

TINT (NTSC format only)

Press this button to control the picture color to be close to natural color. Adjust the level with the VOLUME buttons to control the color tint (Default is 50).

SHARP

Press this button to adjust the picture image.

Adjust the level using the VOLUME buttons to control the sharpness of the image (Default is 50).

VCR

Selects the video signal input to the VCR (composite video BNC connector) and the audio signal input to the VCR terminal (RCA connector) on the rear panel. When selected, the LED will indicate in orange.



Figure 1: Location of Controls

5.2 Rear Panel

See FIGURE 2 for location of rear panel connectors.

VIDEO LINE

VIDEO A IN/OUT

IN: Video signal input terminal.

OUT: Passive loop-through video signal output terminal (auto termination).

NOTE: For corresponding audio signal, use the AUDIO A terminals.

VIDEO B IN/OUT

IN: Video signal input terminal.

OUT: Passive loop-through video signal output terminal (auto termination).

NOTE: For corresponding audio signal, use the AUDIO B terminals.

VCR IN:

Video signal input terminal.

NOTE: For corresponding audio signal, use the AUDIO IN VCR terminal.

AUDIO LINE

AUDIO A IN/OUT

IN: Audio signal input terminal.

OUT: Loop-through audio signal output terminal.

NOTE: For corresponding video signal, use the VIDEO A terminals.

AUDIO B IN/OUT

IN: Audio signal input terminal.

OUT: Loop-through video signal output terminal.

NOTE: For corresponding video signal, use the VIDEO B terminals.

AUDIO IN VCR:

Audio signal input terminal.

NOTE: For corresponding video signal, use the VCR IN terminal.

AC IN

Power input connector. Connects the supplied AC power cord to the appropriate AC outlet.

NOTE:

The impedance is automatically set to 75 ohms by the input of a signal on the input connector while operating in a single connection mode. However, if a cable is connected to the output connector, the connection is placed into the open status by the multiple connection and high impedance automatically selected. Do not leave an unused cable connected to the monitor. If a single cable is used, then it must be connected to the input connector for the 75 ohms auto termination selector to function properly.

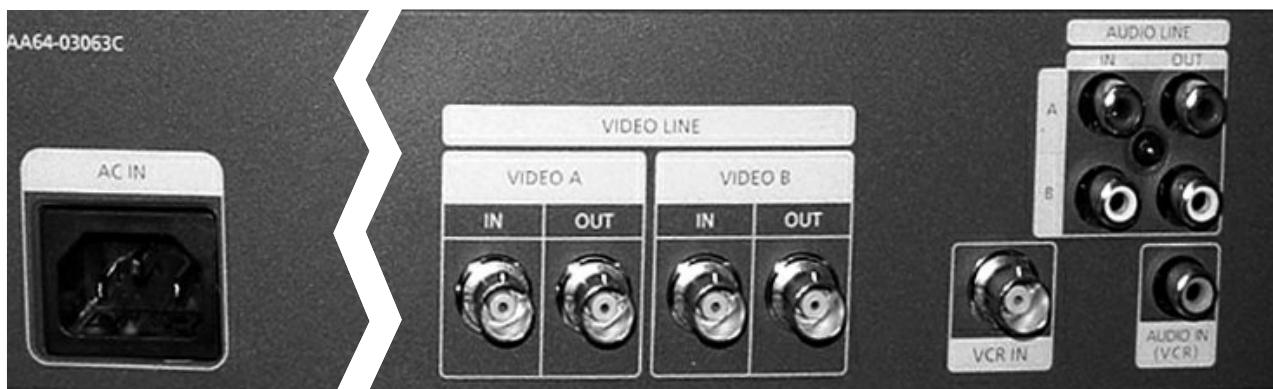


Figure 2: Location of Rear Connectors

6 OPERATION

6.1 Basic Operation

1. Press the Power switch to turn on the power. When the power is ON, the video selector indicator is lit. When the power is OFF, the video selector indicator is unlit.
2. Press (toggle) the Video button to choose VIDEO A or B. Press the VCR button to choose video from the VCR input.
3. Press the VOLUME button to adjust the speaker volume.

6.2 Picture Adjustment

To adjust the picture's Sharp, Tint, Color, Brightness or Contrast, press the appropriate button then adjust with the Volume button. Default for each setting is 50.

7 BASIC CONNECTIONS

The illustration in FIGURE 3 shows the basic connections for composite video equipment.

8 MAINTENANCE

If the quality of the picture on the monitor is poor and cannot be improved, check all system connections and cable runs. Service should only be performed by a qualified technician.

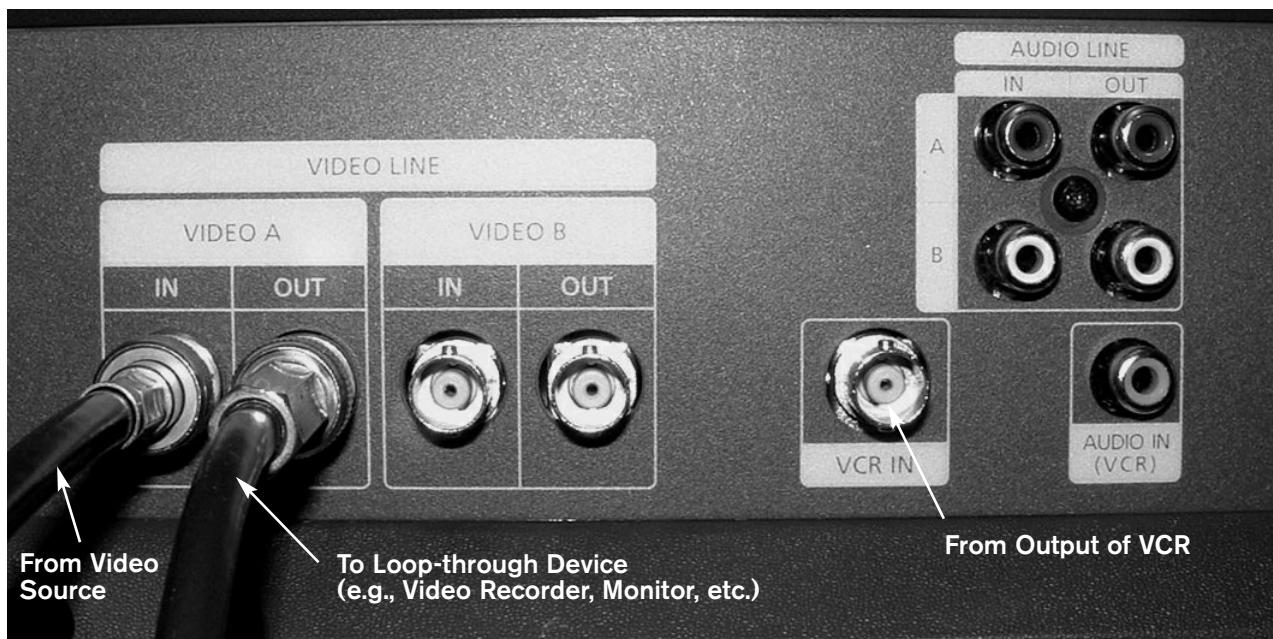


Figure 3: Basic Connections

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